

XIV.—Diptera Nematocera from the Mountains of Borneo. By F. W. EDWARDS.

(With two Plates.)

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This report is based on two collections made in Sarawak by Dr. E. Mjöberg and sent by him to the British Museum for determination. The first was made on Mts. Murud and Dulit in the latter part of 1922, and received in London in the summer of 1923; the second, from Mts. Poi and Penrissen, was received in April 1924. It appeared desirable to combine the reports on the two collections, in order to give us as good an idea as possible in one paper of the Nematocerous fauna of the island. Thanks to the generosity of the Sarawak Museum the types of all the new species have been retained, as well as examples of some other species which were not previously represented in the British Museum collections. Duplicates, when available, have been returned to the Sarawak Museum.

The collection consisted mainly of Tipulidae, of which there were no less than 89 species represented among just under 200 specimens; of these it has been found necessary to describe 51 as new. Some of the supposed new species may perhaps be found later on to be identical with forms described recently by Alexander from Japan or Formosa, but in the great majority of cases this is unlikely. The result is indeed hardly surprising, considering the little that was previously known about the Cranefly fauna of Borneo, and the strong tendency of members of this family to develop local and endemic species, especially in mountainous regions.

So far as I have been able to discover, the following list includes all the Craneflies hitherto recorded from Borneo, as well as a few unrecorded species which are represented in the British Museum.

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|-------------------------------------------------------|----------------------------------------------|
| 1. <i>Elephantomyia argenteocincta</i> Walk. | 9. <i>Eriocera ornata</i> End. |
| 2. <i>Orimarga borneensis</i> Brul. | 10. " <i>pyrrhochroma</i> Walk. |
| 3. <i>Trentepohlia (Mongoma) pennipes</i> O. S. | 11. " <i>rubescens</i> Walk. |
| 4. <i>Eriocera borneana</i> Edw. | 12. " <i>verticalis</i> Wied. |
| 5. " <i>combinata</i> Walk. (<i>diluta</i> Walk.). | 13. <i>Ctenacroscelis pilosulus</i> v. d. W. |
| 6. " <i>infra</i> Walk. | 14. " <i>umbrinus</i> Wied. |
| 7. " <i>lunata</i> Westw. | 15. <i>Tipula cinctipes</i> de Meji. |
| 8. " <i>lunigera</i> Walk. (<i>optabalis</i> Walk.). | 16. " <i>magnicornis</i> End. |
| | 17. " <i>pedata</i> Wied. |
| | 18. " <i>punctifrons</i> Rond. |

Only 7 of these 18 species are represented in the present collections so that the total number of Craneflies now known from Borneo is 100. This of course can only be a small fraction of the number which occurs.

The four Mycetophilidae described here are, I believe, the first members of this family to be recorded from the island.

In regard to the Culicidae, Mr. J. C. Moulton has published (in 13th Report Sarawak Museum, 1925, pp. 46--48) a list of the 92 species known from Borneo. The present collection contained only three species, but it was a surprise to discover that all of these were additions to the Bornean list, two being apparently undescribed.

MYCETOPHILIDAE.

MACROCERA BIFASCIATA sp. n. (Plate 9, fig. 1.)

♂. *Head* brownish ochreous, ocellar spot black, face pale yellow. *Antennae* ochreous, appearing darkened on the apical half owing to the denser pubescence. First flagellar segment about three times as long as the scape, second and third rather shorter, fourth equal to the first, last without long bristly hair. *Palpi* yellow. *Neck* white. *Thorax* uniformly shining black, bristles black. *Abdomen* yellowish with black apical bands on each of tergites 1--5, that on tergite 2 the broadest; segments 6--9 all blackish. *Claspers* with the usual two teeth. *Legs* with the coxæ shining black, trochanters and fore and mid femora and tibia ochreous; tarsi dark; hind femora and tibiae blackish brown except at the base and tip. *Wings* as figured. No macrotrichia. Halteres black.

Length of body 8 mm.; wing 5 mm.; antennae 12 mm.

Mt. Penrissen, 4500 feet—1 ♂.

There is a damaged female of this species in the British Museum from Siam (Talum, 18th January, 1920. H. C. Robinson and N. Annandale).

PLATYURA PENRISSENSIS sp. n. (Plate 10, fig. 23.)

♂. *Head* dark brown, ocelli enclosed in a black spot, the middle one small. Antennae with the scape ochreous, flagellum black, the segments cylindrical and about twice as long as broad. Palpi ochreous, the first two segments brownish. *Thorax* brownish ochreous, without markings; mesonotum with short black bristles, very dense over the wing-roots; pleurotergites bare; postnotum not prominent, but with a few small bristles at its tip. Abdomen mostly ochreous, the segments with trident-like apical bands, due to black pigment showing through the integument (the bands might not be visible in a dry specimen). Hypopygium as figured. *Legs* light ochreous, tibiae and tarsi darker, the fine setae arranged in very regular rows; first segment of front tarsi quite one-third longer than the tibiae. *Wings* with a slight yellowish tinge; a brown band just before the tip, extending from R_5 into cell M_1 , and a very distinct brown shade over the tip of Cu_2 . Third costal division about two-thirds as long as the fourth; costa reaching half-way from R_5 to the tip of M_1 , An nearly if not quite reaching the margin (wing slightly damaged in this position). Halteres white.

Length of body 5.5 mm.; wing 4 mm.

Mt. Penrissen, 4500 feet—1 ♂.

This is apparently nearer to *P. flaviventris* Brun. than to any other described Oriental species, differing in the longer front tarsi, etc.

LYGISTORRHINA CINCTICORNIS sp. n. (Plate 9, fig. 2.)

♂. *Head* black. Ocelli distinct and placed on a rather prominent tubercle, middle one small. Eyes large, in contact with the lateral ocelli. Front not sunken as it is in the American species. Antennae yellow, except segments 5--6 and 10--15, which are blackish; flagellar segments as long as broad, except the last (16th), which is nearly three times as long. Proboscis ochreous. *Thorax* brownish ochreous, pleurae with dark brown markings. *Abdomen* dark brown, segments 2--6 each with a narrow basal ring, hypopygium yellowish. *Legs* with the coxae dark brown, the front pair ochreous at the base;

trochanters brownish; femora ochreous, narrowly dark at the base, the hind pair with the apical half black; tibia ochreous, the hind with the tips broadly black; front and middle tarsi brownish, hind tarsi black; first segment of front tarsi nearly twice as long as the tibia. *Wings* yellowish-tinged, with a brown pattern as shown in the figure. Halteres yellow.

Length of body 7.5 mm.; wing 4 mm.; proboscis 2.5 mm.

Mt. Murud, 7000 feet, October—1 ♂.

No very near ally of this species has been described, but a rather similar West African form is represented in the British Museum collection. *L. asiatica* White (Ceylon) is a much smaller species with unmarked wings.

EXECHIA PALLIDULA sp. n. (Plate 10, fig. 24, 25.)

Head brownish ochreous, face pale ochreous. Antennae uniformly brownish ochreous, palpi lighter. *Thorax* uniformly brownish ochreous. Scutellum with two strong black bristles and two smaller ones between them. *Abdomen* with the first tergite dark brown, its posterior border pale ochreous; tergites 2-4 in the ♂ entirely ochreous; in the ♀ tergite 2 ochreous with a dark brown median stripe which is widened in the middle and at the tip, tergite 3 ochreous, tergite 4 blackish, tergite 5 ochreous, with the hind margin dark; tergites 6-7 in the ♂ dark brown, in the ♀ blackish. Hypopygium as figured; ovipositor constructed almost exactly as in *E. pallida* Stan. *Legs* ochreous, tarsi darkened; tibial spines black, rather long. *Wings* with a slight yellowish tinge; *Rs* very slightly curved down at the tip; *r-m* about three times as long as the median fork; tips of M_1 and M_2 not reaching the wing-margin; fork of *Cu* well beyond the base of *Rs*; *Ax* long and straight, almost reaching the margin. Halteres whitish, base of knob darkened.

Length of body 4.5 mm.; wing 4 mm.

Mt. Murud foot, October—1 ♂ 1 ♀ in copula.

This is very closely allied to the European *E. pallida* Stan., even the hypopygial structure being very similar. There appear, however, to be several nearly allied Oriental species of this group; such are *E. basilinea* Brun. and *E. flava* White. The best distinction between these species is perhaps to be found in the shape of the large eighth sternite of the male.

EXECHIA sp. inc.

Mt. Dulit, 3000 feet—1 ♂.

BIBIONIDAE.

DILOPHUS RUBIDUS sp. n.

♂. *Head* black. *Antennae* black, except for the second segment, which is ochreous. Flagellum apparently with eight segments only, first as long as broad, next three broader than long but distinctly separated and forming a sort of club. *Thorax* with the pronotum, scutum and scutellum uniformly red, postnotum and pleurae rather dark brown. Anterior pronotal comb with two groups of four teeth, posterior comb with two teeth at each side, one placed in front of the other, and between these a row of six smaller teeth. *Abdomen* brownish red, darker at the tip. *Legs* with the coxae and trochanters orange, front femora reddish, darker at base and tip, posterior femora dark brown, lighter at the base, tibiae and tarsi black. Proximal comb of front tibiae with three spines in a transverse row, and a fourth more distally placed on the outer side. *Wings* brownish, darker towards costa, stigma a little darker still; all veins about equally dark. Basal section of *Rs* very short, barely a third as long as *r-m*; median fork with a short stalk; *m-cu* almost vertical, not outwardly oblique as in the European species. Halteres black.

Length of body 4 mm.; wing 4 mm.

Mt. Murud, 7000 feet, October—1 ♀.

The allied *D. nigristigma* de Meij. differs in the dark scutellum and the more numerous teeth in the posterior pronotal comb, also in the brighter red posterior femora.

CHIRONOMIDAE.

CULICOIDES GYMNOPTERUS sp. n. (Plate 9, fig. 3; Plate 10, fig. 26.)

♀. *Head* black, antennae and palpi dark brown; eyes just touching. Last five flagellar segments about three-quarters as long as the first eight; first flagellar segment shortly oval, next 7 flask-shaped, but very little enlarged at the base, gradually becoming more elongate. Palpi slender, the antepenultimate segment scarcely enlarged on the inner side. *Thorax* mostly yellowish above; mesonotum dark brown in front; scutellum narrowly dark brown at the sides, postnotum similarly coloured at the sides and apex. Two scutellar bristles, close together. Pleurae largely dark. *Abdomen* dark

brown. Two spermathecae, which are nearly globular, with very short necks. *Legs* dark brown, femora at the tips and tibiae at the base broadly yellow, less so on the front legs; hind tibiae with the basal half yellow and also rather broadly yellow at the tip. *Wings* slightly yellowish-tinged, with dark grey markings as in the figure. Second radial cell narrow and entirely pale, the middle dark band from the costa not quite touching its tip. Macrotrichia of the membrane restricted to less than a dozen at the extreme tip of the wing. Halteres yellowish.

♂. Resembles the female except for the usual sexual differences. Hypopygium as figured.

Length of body 1-2 mm.; wing 1.3 mm.

Mt. Penrissen, 2000 feet—type ♀; 3000 feet—type ♂.

Mt. Murud, 7000 feet—2 ♀.

CULICOIDES sp. inc.

Mt. Penrissen, 4500 feet—1 ♀.

CULICIDAE.

ANOPHELES WATSONI Leic.

Mt. Murud, 7000 feet, October—3 ♀.

MEGARHINUS sp. n.?

Mt. Poi, 5350 feet—1 ♂.

Apparently allied to *M. acaudatus* Leic. differing in having no trace of white on the second segment of the hind tarsi. Unfortunately the specimen is too denuded to describe.

ARMIGERES MJOBERGI sp. n.

♀. Nearly allied to *A. moulloni* Edw. differing as follows:—

Mesonotum with a very distinct margin of broad, curved, pale ochreous scales; these scales extending all round the margin, being most numerous at the sutural angles. *Abdomen* with a rather distinct metallic gloss; lateral white spots smaller, more rounded, and more silvery-white, sternites more extensively black. Black tip on the outer side of the hind femora rather less extensive. Bases of fork-cells level.

Length of body 4-4.5 mm.; wing 3.7-4 mm.

Mt. Murud, 7000 feet, October—3 ♀ (cotypes).

TIPULIDAE.

LIMNOBIINAE.

DICRANOMYIA PENRISSENENSIS sp. n.

♂. *Head* black. Front about half as broad as one eye. Antennae and palpi blackish; flagellar segments short-haired, all about equal in length, rather elongate oval with short necks. *Thorax* uniformly blackish brown. *Abdomen* blackish above, brown beneath. Hypopygium of simple structure; fleshy lobes large; rostrum short, with two short spines, ventral appendages of side pieces short. *Legs* blackish; integument (but not pubescence) of tarsi and tips of tibiae pale. *Wings* strongly iridescent, uniformly smoky brown, with a small darker brown stigma. *Sc* long, ending at about two-thirds of *Rs*; tip of *R*₁ indistinct, turned up sharply at *r*; *Cu*_{1a} just before base of discal cell. Halteres blackish.

Length of body 5 mm.; wing 5.5 mm.

Mt. Penrissen, 4500 feet—1 ♂.

Probably allied to *D. alta* de Meij., but distinguished by the blackish pleurae.

DICRANOMYIA PUNCTULATA de Meji.

Mt. Penrissen, 3000 feet—1 ♂, 3 ♀; 4500 feet—2 ♀.

DICRANOMYIA SORDIDA Bruin.

Mt. Murud, head camp, 1 ♀.; 5500--6300 feet—1 ♀; Mt. Poi, 5200 feet—1 ♀.

GERANOMYIA MELANOCEPHALA sp. n.

Head, including mouth parts and antennae black. Eyes narrowly separated. Rostrum about as long as the head and thorax together. Palpi with two distinct segments. *Thorax* and *abdomen* rather light brownish ochreous, somewhat darkened dorsally in one or two specimens. Fleshy claspers of male large; rostrum rather long, with a rather long, pre-apical projection which bears the usual two spines at its tip; these spines are very long, and placed so close together that they appear at first sight as a single spine. Ventral projection of side-pieces short. *Legs* brownish, coxae and bases of femora ochreous. *Wings* clear, except for the small stigma. *Sc* reaching beyond the middle of *Rs*; *r* at the tip of *R*₁.

Length of body 5.5--7 mm.; wing 5--6 mm.

Mt. Penrissen, 4500 feet—1 ♂ (type) 2 ♀; Baram River, September—1 ♂; Mt. Murud, top—1 ♂.

RHIPIDIA PICTIPENNIS sp. n. (Plate 9, fig. 4.)

Resembles *R. rostrifera* Edw. (Malay Peninsula and Sumatra), differing as follows:—First antennal segment entirely dark, contrasting with the pale yellow second segment. Thorax with no trace of a dark median line. Wings with small hyaline spots included in the centres of the four main dark costal spots (see figure). Subcostal cross vein absent. Vein M_2 quite free, not connected with either M_1 or M_4 (Cu_1). In the female the segments of the antennal flagellum are nearly globular and without distinct necks, quite unlike those of most other species of the genus.

Mt. Penrissen, 4500 feet—2 ♂; Mt. Dulit, 3000 feet—1 ♀.

RHIPIDIA GRISEIPENNIS sp. n. (Plate 9, fig. 5.)

♀. *Head* dark brownish. Eyes separated by about the width of two or three facets. Antennae and palpi blackish, structure normal. *Thorax* brownish, praescutal stripes darker brown, not very sharply defined; anterior half of median stripe represented by three dark lines with lighter spaces between them.

Pleurae somewhat darker than the dorsum, but not distinctly striped. *Abdomen* rather dark brown, venter lighter except on the posterior margins of the sternites. *Legs* rather light brownish, femora dark brown except towards the base. *Wings* as figured; the greyish markings very extensive and almost obliterating the lighter areas, especially in cells *M* and *Cu*. Halteres ochreous, base of knob darker.

Length of body 6 mm.; wing 6 mm.

Mt. Penrissen, 4500 feet—1 ♂ (type); Mt. Poi, 5200 feet—4 ♀.

In wing-markings this most nearly resembles *R. demarcata* (Brun.), but the thoracic ornamentation is quite different.

RHIPIDIA DISCRETA sp. n. (Plate 9, fig. 6.)

♀. Resembles *R. griseipennis*, differing as follows:—Middle stripe of praescutum with its anterior half entirely dark. Legs somewhat darker, but the femora more extensively light brownish towards the base. Wings with the ground colour tinged with yellow, the spots darker brown and all distinctly separate, cells *M* and *Cu* largely pale, as shown in figure.

Length of body 10 mm.; wing 10.5 mm.

Mt. Murud, top—1 ♀.

LIBNOTES MEGALOPS sp. n.

Head black. Eyes in contact on the front for a considerable distance in both sexes. Antennae with the scape dark brown, flagellum light brown. Flagellar segments oval, verticils short. Palpi and proboscis dark brown. *Thorax* uniformly ochreous. Abdomen brown, last segment and genitalia more ochreous. Hypopygium small, of the usual simple structure, fleshy claspers small. Ovipositor black beneath at the base, anal valves rather short. *Legs* ochreous, tarsi darker; femora with a narrow but sharply defined pre-apical black ring; tips of tibiae also narrowly black. *Wings* with a slight brownish tinge, veins darker brown; no markings except for a small round brownish stigma. Venation as figured by Alexander for *L. nigricornis*, except that Cu_1a is nearer the middle of the discal cell; the wings are also distinctly broader than in *L. nigricornis*, and Ax is about parallel with An for a short distance at the base. Halteres brownish.

Length of body 8 mm.; wing 8--9 mm.

Kalabit Country, October—1 ♂; Baram River, September—1 ♂; Mt. Murud, 5500--6300 feet—1 ♀.

Differs from *L. nigricornis* Alex., in the distinct femoral ring, and in the points mentioned above.

LIBNOTES STANTONI Edw.

Mt. Dulit, 3000 feet—3 ♂; Mt. Murud, 7000 feet—2 ♂; head camp—3 ♂; Mt. Penrissen, 3000 feet—1 ♂; 4000 feet—2 ♂, 1 ♀.

LIBNOTES LIMPIDA Edw.

Mt. Murud, head camp—3 ♂; Mt. Dulit, 3000 feet—1 ♀.

LIBNOTES IMMACULIPENNIS White. Kuching, 1 ♀.

LIBNOTES (GONIODINEURA) nigriceps v. d. Wulp.

Mt. Penrissen, 3000 feet—2 ♂; Mt. Poi, 5000 feet—1 ♀.

LIMNOBIA CITROFOCALIS sp. n. (Plate 9, fig. 7.)

♂. *Head* orange. Front very broad, fully as broad as one eye. Antennae with the scape yellowish, flagellum dark brown; first six flagellar segments rounded and somewhat enlarged beneath, remainder shortly oval, verticils short. Mouth-parts yellowish, greatly reduced and scarcely projecting beyond the oral opening; palpi composed of a single short segment, hairy apically. *Thorax* only moderately humped.

Prothorax entirely orange. A small orange patch on the front of the praescutum, remainder of the mesonotum wholly shining black, with metallic bluish reflections. Pleurae mostly shining dark brown, but the lower part of the sternopleura and a narrow stripe reaching up from this to the base of the wing yellow. *Abdomen* with tergite 1 dull black, with a narrow shining black basal band; tergite 2 shining blue-black on the basal half, dull black on the apical half; 3--6 entirely dull black; 7 dark basally, black apically; 8 entirely orange. Sternite 1 black; 2 orange basally, black apically; 3--4 orange; 5--6 dark brown; 7 dark basally, orange apically; 8 orange. Hypopygium black; claspers small, two pairs somewhat of the *Dicranomyia* type, but the lower one very small; paramere long and slender. *Legs* with the coxae and trochanters orange, the front femora with the basal half yellow, apically half black; mid and hind femora yellow with black tips; tibiae and tarsi black, but the mid and hind tibiae with a narrow ring at the base. Claws long, with one long and sharp basal tooth. *Wings* strongly infuscated, but with a hyaline transverse band just before the cord; base of cell *R* also hyaline; veins black. *Sc* reaching to just beyond middle of *Rs*; *Sc*₂ near its tips; *Rs* rather long, curved at base; *Cu*₁ a little beyond base of the short discal cell. Halteres with black stem and white knob.

Length of body 5 mm.; wing 5--5 mm.

Mt. Dulit, 3000 feet—1 ♂.

A remarkably distinct and beautiful little species, especially noteworthy for its reduced mouthparts, which are less developed than in any other Tipulid known to the writer, although reduction as well as elongation is not unknown in this tribe of flies (cf. *Dicranomyia ventralis* Schum.).

LIMNOBIA MJÖBERGI sp. n.

♂. *Head* black. Eyes in actual contact on the front for a long distance. Antennae brown, flagellum lighter, all but the first few segments elongate oval, verticils rather short. Palpi and proboscis brownish. *Thorax* very strongly humped. Ground colour ochreous. Praescutum with a large round brown patch in the middle posteriorly, from which there extend forwards to the front margin two narrow light brown lines; dark brown patches behind the foveae. Scutum with a pair of large blackish patches. Scutellum dark brown, with an ochreous median line. Postnotum dark brown, sides broadly

ochreous. Pleurae with a distinct but irregular dark brown longitudinal stripe, and below it on the sternopleura a dark brown spot. *Abdomen* ochreous; tergite 1 with a brown spot on each side; tergites 2--6 each with a brown apical band, darkest on 2 and 3. Hypopygium small but of rather complicated structure, the side pieces having large and divided basal lobes extending downwards; fleshy claspers present but small. *Legs* ochreous, tarsi darker, femora with a black ring which leaves the extreme tip brownish; tips of tibiae black. Claws with one small basal tooth. *Wings* with a light ochreous tinge, cells *C* and *Sc* yellowish, veins brown. Stigma small, round, dark brown; a conspicuous dark brown seam over the base of *Rs*, and small dark brown spots on *Sc*₂ and the tip of *Rs*. *Sc* reaching to just beyond apex of *Rs*; *R*₁ turned up at *r*; discal cell widened apically; *Cu*_{1a} placed a little beyond base of discal cell. Halteres ochreous, base of knob darkened.

Length of body about 10 mm.; wing 11.5 mm.

Mt. Dulit, 3000 feet—1 ♂.

Apparently allied to *L. infixa* Walk. (New Guinea to India), but with quite different thoracic coloration.

LIMNOBIA MICROLABIS sp. n. (Plate 10, fig. 27.)

♂. *Head* black. Eyes narrowly separated. *Antennae* and palpi black; flagellar segments shortly oval, short-haired. *Thorax* ochreous; scutum, scutellum, postnotum, and a broad but rather ill-defined stripe across the pleurae rather dark brown. *Abdomen* dark brown, posterior margins of segments narrowly pale. Hypopygium of very unusual structure, the tips of the side pieces being produced into broad flat lobes at the base of which the small claspers are inserted. *Legs* dark brown. *Wings* with a strong uniform brown tinge, stigma hardly darker. *Sc* ending a little before apex to *Rs*; *r* at tip of *R*₁; *Cu*_{1a} just beyond base of discal cell. Halteres dark brown.

Length of body 5 mm.; wing 4.5 mm.

Mt. Penrissen, 4500 feet—1 ♂.

STYRINGOMYIA TRANSVERSA sp. n. (Plate 9, fig. 8.)

♀. *Head* mostly ochreous, dark behind, bristles moderately stout and black. *Antennae* with the scape blackish, flagel-

lum almost white. Palpi blackish. *Thorax* with the pronotum ochreous, blackish at the sides. Mesonotum mostly blackish, but with a pair of distinct ochreous lines on the praescutum which diverge somewhat posteriorly but unite across the suture and continue across the scutum. The four main scutal bristles long, stout and somewhat flattened, though less so than in *S. armata*; scutellar bristles small and slender. Several small discal bristles, rather widely spaced. Pleurae blackish on the upper half, pale ochreous on the lower half. *Abdomen* wholly blackish above, brown-ochreous below; seventh sternite with V-shaped emargination at the tip, the corners produced into long finger-like processes which are slightly swollen apically. *Legs* with the coxae and trochanters whitish-ochreous; femora ochreous, each with three dark rings, the basal one faint, the next two conspicuous, extreme tip also somewhat darkened. Tibiae all ochreous, with the usual two blackish rings, one before the middle and one at the tip. Tarsi ochreous, the tips of the first four and the whole of the fifth segment black. *Wings* with the whole membrane greyish, with darker clouds in the usual positions; veins all dark except the costa, which is all yellow. $R_1 + 3$ unusually short and almost vertical; *Ax* without spur. Halteres blackish.

Length of body 6.3 mm.; wing 4.8 mm.

Mt. Penrissen, 4500 feet—1 ♀.

STYRINGOMYIA BORNEANA sp. n. (Plate 10, figs. 28, 29.)

Closely related to *S. javana* Edw., *S. himalayana* Edw., and *S. fryeri* Edw., but differing from all these in details of genital structure (see figure). Head bristles yellow, as in *S. javana*, but the tips of all the veins distinctly darkened, as in *S. fryeri*; tip of *Ax* conspicuously blackened, but not bent backwards. Cell M_1 rather broadly sessile. Discal bristles of praescutum 4+2, each group enclosed in a dark spot. Scutal and scutellar bristles moderately long but not flattened. Abdominal tergites of ♂ with apical dark marks only.

Mt. Murud, 6000--7000 feet—1 ♂ 1 ♀ (types); 7000 feet—1 ♀.

STYRINGOMYIA FLAVA Brun.

Mt. Murud, 5500--6300 feet—1 ♀; Mt. Penrissen, 2000 feet—1 ♂.

STYRINGOMYIA ARMATA var. *acuta* var. n.

Differs from the type from the Philippine Islands as follows : The two spines on the terminal processes of the side pieces of the hypopygium are much less powerful and more sharply pointed, the lower spine shorter and thinner than the upper ; the process of the side-piece is not at all bifid apically as it is in the type of *S. armata*. Cell M_1 just sessile, not stalked.

Mt. Dulit, 3000 feet, January—1 ♂.

TEUCHOLABIS PAHANGENSIS Edw. M.S.*

Mt. Dulit, 3000 feet, January—1 ♂.

ATARBA ARGENTATA Edwards M.S.*

Mt. Murud, 7000 feet, October—1 ♀.

ATARBA FASCIATA sp. n.

Closely allied to *A. javanica* Alex. and *A. argentata* Edw., differing from the latter as follows : Abdominal tergites with the basal half ochreous, the apical half dark brown. Wings with the veins of the cord and the apex of the discal cell slightly but distinctly darkened. *Sc* shorter, ending much before the middle of *Rs*.

Mt. Penrissen, 2000 feet—1 ♀.

ORIMARGA BORNEENSIS Brun.

Kalabit Country, October—2 ♀.

HELIUS (EURHAMPHIDIA) MIRUS sp. n.

♀. Whole body, including the appendages, ochreous ; legs and halteres rather lighter. Rostrum as long as the head. Flagellar segments almost cylindrical, barely twice as long as broad. verticils nearly twice as long as the segments. *Wings* almost hyaline ; a faint grey transverse band at the cord, including the darker stigma ; tip broadly greyish. *Rs* quite twice as long as $R_2 +_3$; $r-m$ obliterated, the discal cell being in

* Descriptions of these species will shortly appear in a report on the collections of the Malay States Museum, Kuala Lumpur.

contact with *Rs* for a short distance at two-thirds of the length of *Rs*; cell M_1 very narrow at the base; Cu_1a just before the middle of the large discal cell.

Length of body 5 mm.; wing 5 mm.

Mt. Murud; head camp—1 ♀.

HELIUS (*EURHAMPHIDIA*) *NIVEITARSIS* Skuse.

Mt. Penrissen, 4500 feet—1 ♀.

HELIUS *NIGRICEPS* Edw.

Mt. Dulit, 3000 feet—1 ♀; Mt. Penrissen, 4500 feet—1 ♀.

HELIUS *PICTUS* sp. n.

♀. *Head* black, but the antennae, proboscis and palpi entirely light yellow. Rostrum barely as long as the head. Flagellar segments rather elongate oval (only the first few remaining). *Thorax* with the ground colour yellow; praescutum broadly dark brown all round the margin; scutum dark brown, yellowish in the middle anteriorly; scutellum and postnotum entirely dark brown; pleurae yellowish, postero-dorsal part dark brown. *Abdomen* yellowish; tergites 2 and 3 dark brown, 4, 5 and 6 with a broad dark brown apical band and a brownish area in the middle of the basal half; 7 mostly dark brown. Cerci long and slender. *Legs* yellow, tips of femora very narrowly black. *Wings* with the ground colour hyaline, with three dark brown bands, one at the arculus, another across the cord, extending basally for some distance along *M* and *Cu*, and the third at the tip. Veins yellow, black in the dark areas. $R_2 +_3$ as long as *Rs*; *r-m* vertical, well beyond base of $R_4 +_5$; Cu_1a just before the middle of the small discal cell. Halteres pale yellow.

Length of body 5.5 mm.; wing 6.5 mm.

Mt. Dulit, 3000 feet, January—2 ♀.

HELIUS *FASCIVENTRIS* sp. n. (Plate 10, fig. 30.)

♂. *Head* black. Eyes separated only by a narrow line. Rostrum about as long as the head, blackish-brown. Palpi

with the first two segments brown, last two ochreous, penultimate swollen and only half as long as the slender terminal segment. Antennae brownish, about as long as the thorax, short-haired; last six segments slender and cylindrical, basal flagellar segments oval. *Thorax* ochreous. *Abdomen* pale ochreous; segment 2 with a dark brown band near the middle, 3-6 each with a dark brown band at the base; 8 and 9 all dark, but hypopygium mostly pale; structure as figured. *Legs* dark brownish, tarsi obscurely whitish towards the tip. *Wings* hyaline, with conspicuous oval stigma; venation almost as in *H. kambangani* de Meij., Cu_1a being beyond the middle of the small discal cell. Halteres dark brown.

Length of body 6.5 mm.; wing 6.5 mm.

Mt. Penrissen, 3000 feet—1 ♂.

The nearest ally of this species is *H. kambangani* de Meij. which differs in its uniformly dark colour and less conspicuous and more elongate stigma.

HELIUS (RHAMPHOLIMNOBIA) RETICULARIS Alex.

Mt. Dulit, 3000 feet—1 ♀; Mt. Penrissen, 3000 feet—1 ♀.

Previously only known from Java.

ELEPHANTOMYIA ARGENTEOCINCTA Walk.

Mt. Murud, 5500--6300 feet—1 ♂; Songei Tutau—1 ♀.

Belongs to the same group as *E. fuscomarginata* End., as do nearly all the Oriental species of the genus. Alexander has recently proposed the subgeneric name *Elephantomyodes* for this group.

ELEPHANTOMYIA NIGRICEPS sp. n.

♂. *Head* black. Front very narrow, the eyes almost touching. Scape of antennae blackish (flagellum broken). Proboscis broken near base. *Thorax* brownish orange, the pronotum dark brown in the middle. *Abdomen* blackish; tergites 3, 4 and 5 each with a narrow yellow ring at the base; hypopygium ochreous. *Legs* with the coxae and trochanters brownish; femora and tibiae darker brown; tarsi with the basal half or rather more of the first segment blackish, remainder white, second and third segments white, fourth somewhat brownish, fifth black. *Wings* hyaline with dark brown veins. Stigma dark brown, filling the apical part of cells Sc and R_1 and reaching back in cell C nearly to the base of Rs . Venation

almost as in *E. fuscomarginata* End., but *Rs* rather shorter and more bent, and the tip of *An* much further from the tip of *Cu*₂. Halteres pale; base of knob dark.

Length of body 7 mm.; 6.5 mm.

Mt. Dulit, 3000 feet, January—1 ♂.

An immature female Mt. Murud, 5500--6300 feet is probably referable to this species, but differs in the absence of the yellow bands on the abdomen, and the distinctly separated eyes. The new form is close to *E. aurantia* (Brun.) and *E. fuscomarginata* End., differing from the former in the colour of the abdomen, from the latter in the venation, and from both in the black instead of yellow head. In *E. aurantia* the front is distinctly broader than it is in the supposed female of *E. nigriceps*.

Another female in the collection of the Malay States Museum from Peninsular Siam is certainly the same species, although the dorsum of the thorax is somewhat darkened.

CERATOCHEILUS MAJUS sp. n.

♀. *Head* black, dusted over with grey. Front nearly as broad as one eye; no corniculus. *Antennae* black, of the usual structure. *Proboscis* black, not quite as long as the abdomen. *Thorax* with ochreous ground colour. *Praescutum* with its anterior end greatly produced; mainly covered by three broad dark brown stripes, the lateral pair confluent anteriorly with the median, leaving the margin and two narrow posterior lines ochreous. *Scutum* largely covered by a pair of dark brown spots. A brownish stripe along the upper part of the pleurae, in which are included two large darker brown spots; another dark brown spot on the lower part of the sternopleura. *Abdomen* dark brown, the tergites obscurely, the sternites conspicuously ochreous at the base. *Ovipositor* very long, base ochreous, valves dark. *Legs* dark brown, femora lighter towards the base; trochanters blackish, coxae ochreous. *Wings* slightly brownish, veins indistinctly seamed with darker brown. *R*₂₊₃ rather long and parallel with the tip of *R*₁. *Cu*_{1a} at base of discal cell. Halteres white.

Length of body 8 mm.; proboscis 5 mm.; wing 6.5 mm.

Mt. Murud, head camp, November—1 ♀.

Allied to *C. latifrons* Brun.; differing conspicuously in thoracic coloration, larger size, and longer *R*₂₊₃.

TOXORHINA FASCIATA sp. n.

Head black, strongly dusted with grey. Front rather narrow, parallel-sided for some distance; in the ♂ narrower than in the ♀. Antennae of normal structure; scape light brown; flagellum blackish. Proboscis rather shorter than the abdomen in the ♀ longer in the ♂. Neck very long. *Thorax* with the praescutum only moderately produced forwards, dark brown with the margin ochreous. Scutum, scutellum and postnotum dark brown. Pleurae light ochreous, with a conspicuous dark brown stripe extending from the neck to the base of the abdomen. *Abdomen* dark brown dorsally, tergites 1-7 in the ♀, 2-5 in the ♂, each with a conspicuous ochreous band on the posterior margin; tergites 8 and 9 and practically the whole venter ochreous. Ovipositor moderately long. *Legs* dark brownish, bases of femora higher, coxae and trochanters ochreous. *Wings* hyaline, veins brownish. Discal cell open; cell M_3 not quite so long as its stem; Cu_1a at or immediately before the fork of M . Halteres brownish ochreous.

Length of body ♂ 7.5, ♀ 10 mm.; proboscis ♂ 7.5, ♀ 6 mm.; wing ♂ 6.5 mm.

Mt. Dulit, 3000 feet, January—1 ♀; Mt. Penrissen, 4500 feet—1 ♂.

TOXORHINA TRICHORHYNCHA sp. n.

♀. *Head* ochreous, slightly darker in the middle. Front narrow above the antennae, but widening above, sides divergent. Antennae uniformly blackish, structure normal, rather long. Proboscis as long as the whole body. Neck moderately long, black, the dorsal membrane pale ochreous. *Thorax* with the praescutum only moderately produced forwards, ochreous-brown, with traces of three darker stripes. Postnotum brownish, apparently without median furrow. Pleurae with a dark brown median longitudinal stripe, sharply margined below, longer part pale ochreous. *Abdomen* dark brownish dorsally, the tergites with rather narrow ochreous apical bands; venter ochreous; ovipositor rather shorter than in *T. fasciata*. *Legs* dark brown, except for the ochreous coxae. *Wings* brownish-tinged, with slightly darker seams along the costa and most of the veins. Discal cell open; cell M_3 a little

longer than in its stem; *Cu 1a* well before fork of *M*. Halteres brownish, knobs lighter.

Length of body 10 mm.; proboscis 10 mm.; wing 6.5 mm.

Mt. Poi, 200 feet—1 ♀.

Allied to *T. producta* Edw. Ms. (Malay States), but the praescutum not nearly so much produced.

MOLOPHILUS MURUDANUS sp. n. (Plate 10, fig. 33.)

♂. *Head* dark brown. Antennae with the scape light brown, flagellum dark brown, about as long as the body, segments elongate and somewhat flask-shaped (denuded). Palpi dark brown. *Thorax* and *abdomen* ochreous brown, without definite markings. Hypopygium very elongate, structure as figured. *Legs* brownish. *Wings* denuded; venation normal. Halteres light ochreous.

Length of body 3.5 mm.; wing 4.5 mm.

Mt. Murud, head camp, November—1 ♂.

Apparently nearest to *M. assamansis* Brun., which has quite a different hypopygium.

MOLOPHILUS ALBICEPS sp. n. (Plate 10, fig. 32.)

Head whitish, as is the scape of the antennae; flagellum and palpi black. Antennae short in both sexes; flagellar segments oval. *Thorax* reddish-brown, pleurae somewhat darker; a whitish stripe round the margin of the mesonotum. *Abdomen* in ♂ blackish, hypopygium large and elongate, structure as figured; in ♀ reddish-brown. *Legs* yellow and black; front and middle femora with the basal half brownish, darkening apically, beyond which is a clear yellow ring, tip broadly black; hind femora yellow with two black rings, the first just beyond the middle the second apical; all the tibiae yellow with a black ring before the middle and another at the tip; tarsi black, basal half of first segment yellow. *Wings* with dark hair; venation normal. Halteres white.

Length of body 3--4mm.; wing 3.5 mm.

Mt. Murud, 7000 feet, October—3 ♂, 2 ♀ (cotypes); foot—1 ♂; headquarters—1 ♀.

ERIOPTERA CACUMINIS sp. n. (Plate 10, fig. 31.)

Head light ochreous, darker in the middle. Antennae with the scape and base of flagellum ochreous, the rest dark brown,

structure alike in the two sexes; flagellar segments oval, the terminal one very small. Palpi rather long, black. *Thorax*, *abdomen* and *legs* ochreous, the pleurae and the dorsum of the abdomen rather darker. Male hypopygium as figured. Ovipositor normal. *Wings* with a very slight brownish tinge, veins light brown, except the upper part of the cord, which is dark brown; stigma absent. Hair on veins and fringe moderately long. *Rs* long, fully as long as R_2 ; $r-m$ far beyond the middle of the wing; cell M_3 long, its base slightly outside that of cell R_2 ; *Ax* very long and sinuous. Halteres with whitish stem and black knob.

Length of body 4.5-5.5 mm.; wing 6-5 mm.

Mt. Murud, top—1 ♂ (type), 2 ♀; 7000 feet, October—1 ♂, 1 ♀; headquarters—1 ♀.

This is closely related to *E. nigripalpis* de Meij., differing mainly if not solely in the structure of the male claspers.

ERIOPTERA MURUDENSIS sp. n.

♀. *Head* dark brown in the middle, broadly pale ochreous round the eyes, pubescence black. Antennae with the scape dark brown; first two flagellar segments large and ochreous, the rest oval and dark brown. *Thorax*, *abdomen* and *legs* uniformly brownish ochreous. *Wings* light brownish, the cord and Cu_2 rather conspicuously seamed with dark brown; stigma brownish, not very distinct. Hair on veins long, brownish. *Rs* long, straight, almost as long as R_2 ; $r-m$ well beyond the middle of the wing; cell M_3 long, its base slightly outside that of cell R_2 ; *Ax* very long and conspicuously sinuous. Halteres ochreous.

Length of body 6.5 mm.; wing 5.5 mm.

Mt. Murud, headquarters, October—1 ♀.

The most striking character of this species is the continuation of the dark seam of the cord along the whole of Cu_2 .

ERIOPTERA NIGRIBASIS Edw. MS.*

Mt. Dulit, 3000 feet—1 ♀; Mt. Penrissen, 3000 feet—1 ♀.

* Kuala Lumpur Museum Collection.

ERIOPTERA SUBFUSCA Edw.

Mt. Penrissen, 3000 feet—2 ♂.

ILISIA FENESTRATA de Meij.

Mt. Murud, head camp, November—1 ♂.

EMPEDA GRACILIS de Meij.

Mt. Penrissen, 3000 feet—1 ♀.

EMPEDA POIENIS sp. n.

♀. *Head* ashy-grey. *Antennae* and *palpi* blackish-brown, flagellar segments shortly oval. *Thorax* dull brownish ochreous; scutellum and prothorax rather lighter, but no distinct whitish stripe at the edge of the mesonotum as in *E. gracilis*. *Abdomen* brownish. *Legs* with the coxae and trochanters ochreous, remainder dark brown, without scales.

Wings hyaline; vein light brown; venation as in *E. gracilis*. Knob of halteres darkened.

Length of body 3.5 mm.; wing 3.5 mm.

Mt. Poi, 5200 feet—1 ♀.

This may possibly be a variety of the European *E. nubila* Schum., from which the only obvious distinction is in the darkened knob of the *halteres*. *E. gracilis* de Meij. is much less closely allied as it has scaly legs.

GONOMYIA (PROGONOMYIA) BRUNNESCENS sp. n. (Plate 10, fig. 36.)

♀. *Head* dark brown above; proboscis, palpi and scape of antennae ochreous; flagellum dark brown, segments elongate oval. *Thorax* with the ground-colour ochreous-brown, praescutum somewhat darker, especially on the anterior ends of the three faintly indicated stripes; scutellum yellowish; postnotum and pleurotergites blackish; a large blackish patch on the anepisternite, and a dark brown patch on the sternopleurite. *Abdomen* brownish, hypopygium as figured. *Legs* rather dark brown. *Wings* with a slight greyish tinge; stigma and a distinct shade across the cord darker. Venation almost as in *G. nigripes* Brun. Halteres whitish.

Length of body 6 mm.; wing 8 mm.

Mt. Murud, head camp, November—1 ♂.

GONOMYIA (s. str.) BRYANTI Alex.

Mt. Murud, head camp, November—1 ♂.

Mt. Penrissen, 2000 feet—1 ♀ ; 3000 feet—1 ♀ .

I am not quite sure of the identification, Alexander's figures not being very satisfactory. The structure of the hypopygium, and especially of the aedoeagus (not figured or described by Alexander) is extremely similar to that of the European *G. dentata* de Meij.

GONOMYIA SYMMETRICA sp. n. (Plate 10, fig. 34, 35.)

♂. *Head* blackish, rostrum brown. *Antennae* and *palpi* black, *flagellar* segments slender. *Thorax* with the whole mesonotum dark brownish, pleurae lighter. *Abdomen* brown; hypopygium as figured, the aedoeagus symmetrically constructed, but otherwise of a similar type to that of the *tenella* group. *Legs* blackish, except the coxae and trochanters. *Wings* hyaline, stigma brown, veins all dark. *Sc* ending only a short distance beyond base of *Rs*, *Sc*₂ near its tip. *Rs* nearly straight and moderately long; *R*₂+₃ scarcely arched; *R*₂ nearly half as long as *R*₃ and not very oblique; *Cu*_{1a} well beyond base of discal cell, which is pointed at the base. Halteres pale.

Length of body 3 mm.; wing 3.5 mm.

Mt. Penrissen, 2000 feet—1 ♂.

RHABDOMASTIX FLAVIDULA sp. n. (Plate 10, fig. 37.)

♀. Colour uniformly yellow-ochreous, except for the dark brown palpi and flagellum, and the brownish legs. *Flagellar* segments oval. *Thorax* bare; tuberculate pits present. *Abdomen* almost entirely bare, with rows of fine hairs only on the posterior margins of the tergites. *Anterior* trochanters slightly elongate, a little over twice as long as broad. *Wings* with a slightly yellowish tinge, veins mostly pale, venation as figured; *Rs* unusually short for a member of this genus; *R*₂ vertical and without macrotrichia. Arcular cross-vein present.

Length of body 5 mm.; wing 4.8 mm.

Mt. Penrissen, 2000 feet—1 ♀ (type); Kalabit Country, October—1 ♀ .

A rather aberrant species of the genus, which seems to have a good deal in common with the Australian *Horistomyia*.

TRENTEPOHLIA (TRENTEPOHLIA) VENUSTIPENNIS sp. n. (Plate 9, fig. 9.)

♀. Nearly related to *T. ornatipennis* Brun. (India) and *T. festipennis* Edw. (Malay Peninsula), differing from the former as follows: Ground colour of wings more extensively dark; all the white markings edged with darker brown than the general ground colour; lower half of wing more variegated; two conspicuous white spots alternating with darker patches in the lower basal cell. Cu_1a much nearer to the fork of M than is the base of cell M_1 .

Mt. Dulit, foot—2 ♀.

TRENTEPOHLIA (PLESIOMONGOMA) NIGROPENNATA Edw. MS.*

Mt. Dulit, foot—1 ♀.

TRENTEPOHLIA (MONGOMA) PENNIPES O.S.

Mt. Dulit, foot—2 ♂; Songei Tutau—1 ♂.

TRENTEPOHLIA (MONGOMA) FORTIS sp. n.

♂. *Head* ochreous, with a strong central keel. *Scape* of antennae brownish-ochreous (flagellum missing). *Palpi* and *proboscis* ochreous. *Thorax* uniformly ochreous. *Abdomen* ochreous, with a narrow brown median dorsal line; *claspers* black, of the usual form. *Legs* rather stout, *coxae* and *femora* ochreous; *tips* of the latter rather broadly and conspicuously black; *tibiae* ochreous at the base, gradually shading to black at the tip; *tarsi* dark brown, *hind femora* with only three or four short spines close together at the base beneath. *Wings* rather broad, hyaline, without markings on the membrane; *veins* mostly yellowish, but the tip of R_s , cross-vein r , base of R_2 , and the whole of R_4+5 and Cu black. R_2 long, placed a little beyond r , which is oblique; *discal cell* rather less than twice as long as broad; cell M_1 with its base considerably nearer the base of the *discal cell* than that of cell M_3 ; Cu_1a about half its length beyond the base of the *discal cell*; Cu_2 ending almost in the tip of An . *Halteres* light ochreous.

Length of body 14 mm.; wing 12 mm.

Kalabit Country, October—1 ♂.

A large rather stoutly built species, evidently allied to *T. cariniceps* End. and *T. nigriceps* de Meij. from Sumatra, but quite distinct.

* Kuala Lumpur Museum Collection.

TRENTEPOHLIA (MONGOMA) PARVICELLULA Edw. MS. ?*

Mt. Penrissen, 4000 feet—1 ♂.

TRENTEPOHLIA (MONGOMA) SARAWAKENSIS sp. n.

Head black. Eyes narrowly separated above, just contiguous below. Antennae with the first segment of the scape black, second dark brown. Flagellar segments about three times as long as broad; first five or six ochreous, the rest dark brown. Palpi blackish. *Thorax* brownish-ochreous, without distinct markings. *Abdomen* dark brown, lighter beneath. Hypopygium rather short, of normal structure. *Legs* with the femora dark brown, bases and tip ochreous; no spines; tibiae and tarsi entirely dark brown. *Wings* greyish-tinged; costal and subcostal cells ochreous; stigma distinct, brown; *Rs*, *Cu* and the cross-vein rather distinctly seamed with brown. Venation as in *T. pennipes* O.S., except that the bases of cells M_1 and M_3 are almost level. Halteres whitish.

Length of body 6.5--8 mm.; wing 7--8 mm.

Mt. Penrissen, 4500 feet—3 ♂, 2 ♀ (cotypes).

LECTERIA BIPUNCTATA sp. n. (Plate 9, fig. 10.)

♂. *Head* dark brown above, ochreous beneath. Proboscis short, light ochreous. Antennae with the first segment black, second brown, next three ochreous, indistinctly separated and forming a sort of cone, remainder black. Palpi black, apparently consisting of a single segment (no sign of others having been broken off). *Thorax* reddish ochreous, prothorax blackish. Praescutum with indications of three dark brown stripes posteriorly, towards the front with a pair of round black spots, another small dark spot towards each side posteriorly. Scutum mostly dark brown. Postnotum with a small black spot in each basal corner. *Abdomen* elongate, ochreous, the segments with narrow black posterior and lateral borders. *Legs* ochreous, with long erect hair. Femora with a narrow dark brown ring at about three-fourths of their length; tibiae with a broad whitish ring near the base, followed by an equally broad black ring, tip broadly black; tips of tarsal segments blackened. *Wings* as figured; ground-colour hyaline, with numerous brown dots; veins mostly ochreous. Halteres ochreous.

* Kuala Lumpur Museum Collection.

Length of body 23 mm.; wing 15 mm.

Mt. Dulit, 3000 feet, January—1 ♂.

This is apparently the first species of this interesting genus to be recorded from the Oriental region. It bears a certain amount of resemblance to the African *L. pluriguttata* Alex.; but the leg-markings are distinctive.

CONOSIA IRRORATA Wied.

Kuching—1 ♂, 1 ♀.

EPIPHRAGMA KLOSSI Brun.

Kalabit Country, October—1 ♀.

LIMNOPHILA (DICRANOPHRAGMA) FENESTRATA sp. n. (Plate vi, fig. 11).

Head blackish. *Antennae* with the first segment blackish, next few segments ochreous, rest dark. *Palpi* black. *Thorax* brown, praescutum with three indefinite darker stripes, lighter anteriorly. *Abdomen* dark brown above, venter mostly ochreous, with dark brown sub-apical bands on the sternites. *Legs* yellowish, only the extreme tips of the tibiae and tarsal segments darkened. *Wings* with conspicuous ocellate markings as figured; as in other species of this genus the male wings are broader than those of the female, the hind margin coming almost to a point at the tip of *Ax*. Costal fringe much longer in the male than in the female. *Halteres* ochreous.

Length of body 5-6 mm.; wing 6.5 mm.

Mt. Murud, head camp, November—1 ♂ (type), 2 ♀.

In its wing-markings this species is remarkably distinct from other members of the subgenus, and has a strong superficial resemblance to *Ilisia fenestrata* de Meij.

LIMNOPHILA (DICRANOPHRAGMA) MACULITHORAX sp. n. (Plate 9, fig. 12).

♀. *Head* brown, lighter above the antennae. *Rostrum* and *palpi* dark brown. *Antennae* with the scape pale ochreous, first five or six flagellar segments somewhat rounded, white, the rest very slender, brownish. *Thorax* with the ground colour ochreous, rather elaborately spotted with brown. *Praescutum* with three small brown marks on the front margin, another pair over the foveae; a pair of dumb-bell-shaped marks

along the interspaces, and a smaller pair of marks between these and the lateral margin. Scutum, scutellum and postnotum mostly dark brown. Pleurae with a rather narrow brown stripe along the middle; a pair of brown spots above this stripe and another pair below it. *Abdomen* dark brown. *Legs* yellowish; femora with a narrow dark subapical ring, the tip beyond this almost white. *Wings* as figured. Halteres whitish, base of knob darkened.

Length of body 6.5 mm.; wing 6 mm.

Mt. Penrissen, 3000 feet—2 ♀.

In its wing-markings this species resembles *D. interrupta* Brun. (India) and *D. formosa* Alex. (Formosa) but neither of these have any special ornamentation on the thorax.

LIMNOPHILA (DICRANOPHRAGMA) PALLIDITHORAX sp. n. (Plate 9, fig. 13; Plate 10, fig. 39.)

Head blackish. Proboscis and palpi black. Antennae with the first segment black, second and third pale ochreous, rest dark brown. Flagellum short-haired, all segments except the first one or two rather elongate oval. *Thorax* pale ochreous; anterior ends of praescutal stripes and two spots on each lateral margin of the praescutum dark brown, more distinct in the male. Pleurae with a rather indistinct longitudinal brown stripe. *Abdomen* brownish, genitalia lighter, male claspers as figured. *Legs* almost uniformly ochreous, slender. *Wings* as figured; basal cells with a rather variable number of small dark spots, but no dark cloud as in the last two species. Veins mostly pale. Halteres pale ochreous.

Length of body 4.5-5.5 mm.; wing 6 mm.

Mt. Penrissen, 4000 feet—1 ♂ (type); 3000 feet—1 ♀; 2000 feet—1 ♀.

LIMNOPHILA (EPHELIA) GRANULATA sp. n. (Plate 9, fig. 17; Plate 10, fig. 38.)

Head black. Palpi and scape of antennae black. Flagellum with the first five or six segments pale ochreous, enlarged beneath, not longer than broad; remaining segments shortly cylindrical, somewhat darkened, slightly longer in the male than in the female, verticils two or three times as long as the segments. *Thorax* brownish, with rather variable darker brown markings; usually two rows of small dots on the praescutal interspaces, a mark along the lateral margin of the praescutum.

scutum behind the fovea, and an indefinite longitudinal stripe on the pleurae; also other obscure mottlings. *Abdomen* dark brown: hypopygium yellowish, tips of side pieces black; claspers as figured. *Legs* yellowish; femora with a dark brown ring at the tip, before which the colour is lighter; proximal end of the ring narrowly blackish. *Wings* rather broad in both sexes, but (as usual) more so in the male, with distinctive markings as shown in the figure; the centres of the larger dark patches (except those on the costal) are lighter brown. Halteres ochreous, base of knob darkened.

Length of body 7 mm.; wing 6 mm.

Mt. Penrissen. 2000 feet—4 ♂, 3 ♀ (cotypes); 3000 feet—1 ♂, 6 ♀.

LIMNOPHILA (EPHELIA) DULITENSIS sp. n. (Plate 9, fig. 16.)

♀. *Head* black. Palpi and scape of antennae black. First four or five segments of flagellum ochreous, slightly darkened at the base above, rounded beneath, the rest slender, nearly cylindrical, brownish; hairs rather longer than the segments. *Thorax* rather dark brownish, praescutum more ochreous in front, markings indistinct; a few dark dots on the praescutal interspaces. *Abdomen* dark brown, ovipositor ochreous. *Legs* yellowish, the tips of the femora with a rather sharply defined dark brown ring, the extreme tip somewhat lighter. *Wings* with dark brown markings as shown in the figure. Costa yellowish in the light areas, other veins darker. Halteres ochreous, base of knob darkened.

Length of body 8 mm.; wing 7 mm.

Mt. Dulit, 3000 feet, January—1 ♀.

Resembles *L. (E.) fascipennis* Brun. in its wing-markings, differing in the structure and colour of the antennae.

LIMNOPHILA (POECHLOSTOLA) GUTTULARIS sp. n. (Plate 9, fig. 14; Plate 10, fig. 40.)

♂. *Head* blackish. Antennae with the first segment blackish, second ochreous brown; base of flagellum composed of small rounded dark brown segments, apical half missing. Palpi black. *Thorax* brownish-ochreous; posterior ends of praescutal stripes, patches behind the foveae, centres of scutal lobes, postnotum and most of pleurae darker brown. *Abdomen* dark brown, sternites largely ochreous. Claspers as figured; penis much shorter than in *L. murudensis*, but still of the

Poecilostola type. *Legs* brownish ochreous, tips of femora slightly darkened, tips of tibiae a little more so. *Wings* with a faint yellowish tinge; markings as in the figure. Halteres broken.

Length of body 7 mm.; wing 7 mm.

Mt. Murud, head camp, November—1 ♂.

The species has a strong superficial resemblance to *L. (Dicranophragma) pallidithorax* sp. n., owing to the similarity of the wing-markings.

LIMNOPHILA (POECILOSTOLA) MURUDENSIS sp. n. (Plate 9, fig. 15; Plate 10, fig. 41.)

♂. *Head* dark brown, lighter beneath. *Antennae* with the scape blackish, flagellum dark brown except for the first segment, which is more ochreous; first three or four flagellar segments rounded, rest gradually becoming more slender, verticils not much longer than the segments. *Palpi* blackish. *Thorax* brownish ochreous, without definite markings; scutum, scutellum and postnotum darker brown. *Abdomen* brown, sternites with ochreous basal bands; hypopygium yellow, structure as figured. *Legs* yellow; femora with a very narrow and indistinct ring some distance before the tip. *Tips of tibiae* conspicuously black, tips of tarsal segments also darkened. *Wings* slightly yellowish, with light brown markings as in the figure; costa, subcosta and R_1 yellow. Halteres yellowish.

Length of body 8 mm.; wing 8 mm.

Mt. Murud, head camp, November—2 ♂.

LIMNOPHILA (PILARIA) MELANOTA Alex.?

Mt. Penrissen, 3000 feet—1 ♂.

The specimen answers to Alexander's description, the type of which was from Gifu, Japan. Hypopygium constructed as in the European *L. discicollis* Mg. Flagellar segments with long pubescence about twice as long as the diameter of the segments, and each with one long dorsal hair, about as long as the segment.

LIMNOPHILA (PSEUDOLIMNOPHILA) PALMERI Alex.?

Mt. Poi, 5000 feet—1 ♀.

LIMNOPHILA (TROGLOPHILA) ALTICOLA sp. n. (Plate 9, fig. 18.)

♂. *Head* rather light ochreous. *Eyes* large, separated above by little more than the width of one facet, but much more widely separated below the mouth parts. *Antennal scape* yellow.

lowish, very short. Flagellum blackish, longer than the body, first segment the longest, the others gradually decreasing in length, clothed with extremely long pubescence, mixed with some shorter hairs. Palpi dark brown, first segment short, second a little over twice as long as broad, third more slender and nearly twice as long as the second, fourth still more slender and half as long again as the third. *Thorax* short and rounded, ochreous-brown above, pleurae paler; apparently no tuberculate pits. *Abdomen* brownish; claspers as figured; penis and parameres short. *Legs* with the coxae and trochanters pale ochreous, remainder dark brown; spurs minute. *Wings* slightly greyish, unmarked, venation as figured; posterior fringe long; all the veins with rather long macrotrichia. Halteres ochreous.

Length of body 4 mm.; antennae, 5.5 mm.; wing 4.5 mm.

Mt. Penrissen, 4000 feet—1 ♂.

Apparently nearly allied to the type of the subgenus (*L. cavernicola* Brun. of Assam), differing in the longer *Sc* and the position of *Cu 1a* just at the base of the discal cell. The hypopygial structure suggests a possible relationship with *L. nemorialis* Mg. and allied species.

ERIOCERA VERTICALIS Weid.

Baram River, September—4 ♂.

ERIOCERA SUBPAENULATA sp. n.

♂. *Head* black. Front moderately broad, without tubercle. Antennae blackish, the base of the first flagellar segment ochreous; sixth (last) flagellar segment very short. Palpi blackish. *Thorax* dorsally blackish-brown, somewhat dusted with grey; a single small dull blackish spot on the scutum immediately above the root of each wing; Pleurae mostly ochreous, a dark brown spot on the lower part of the sternopleura, another on the anepisternite, and a third at the base of the halteres. *Abdomen* dark brown dorsally, with obscure ochreous bands beyond the middle of segment 2 and at the bases of segments 3 and 4; venter and hypopygium ochreous. *Legs* dark brown, coxae, trochanters and bases of femora ochreous. *Wings* smoky, stigma darker, rather conspicuous; venation as in *E. paenulata* End., except that *r-m* is placed just at the fork of *Rs*. Halteres blackish, base of stem ochreous.

Length of body 8.5 mm.; wing 11 mm.

ERIOCERA MURUDENSIS sp. n. (Plate 9, fig. 19.)

♂. *Head* blackish brown, frontal tubercle scarcely indicated. *Antennae* longer than the head and thorax together; first segment blackish, remainder brownish-ochreous; first two segments of flagellum together longer than the remaining four; last very short. *Palpi* dark brown. *Thorax* dark brown, unmarked, not conspicuously hairy. *Abdomen* rather short and stout, dark brown, slightly and uniformly shining. *Legs* moderately stout, dark brown except for the yellow bases of the femora. *Wings* rather smoky; a large white spot over the outer ends of the basal cells, and several smaller yellowish spots, as shown in the figure. *Halteres* dark brown.

Length of body 8.5 mm.; wing 9 mm.

Mt. Murud, head camp, November—1 ♂.

This is perhaps nearer to *E. decorata* Brun. than to any other previously described species, but differs in the position of r well beyond the fork of $R_2 +_3$, and in the wing-markings.

CYLINDROTOMINAE.

STIBADOCERA METALLICA var. *fasciata* n.

♂. Closely allied to *S. metallica* Alex. (Java), differing chiefly as follows:—*Antennae* with first flagellar segment ochreous. *Prothorax*, *coxae*, and first abdominal segment clear yellow; segments 3--5 of the abdomen with distinct ochreous bands at the base.

Length of body 8 mm.; wing 8.5 mm.; antennae 12.5 mm.

Mt. Murud, head camp, November—1 ♂.

STIBADOCERELLA ALBITARSIS de Meij.

Mt. Murud, 6000--7000 feet—1 ♂.

TIPULINAE.

NESOPEZA PERPULCHRA sp. n. (Plate 9, fig. 22.)

♂. *Head* dark ochreous brown. *Antennae* a little longer than the head and thorax together; scape light ochreous; flagellum brown, ringed with ochreous at the joints; first flagellar segment about twice as long as the second, next four or five about equal in length, the rest gradually shorter. *Palpi* dark brown. *Thorax* dark ochreous brown, unmarked. *Abdomen* ochreous brown, the segments with obscurely darker bands before the middle and at the tip. *Hypopygium* small, claspers rather short and broad. *Legs* with the *coxae* dark

brown, trochanters ochreous, femora and tibiae brownish with the tips slightly darkened, tarsi wholly pale ochreous. *Wings* with a beautiful pattern of dark and light brown, with narrow lines, as shown in the figure. Halteres ochreous, knob somewhat darkened.

Length of body 10 mm.; wing 11 mm.

Mt. Murud, head camp, November—1 ♂ (type); October—1 ♂.

NESOPEZA GRACILIS (de Meij.).

Mt. Murud, head camp, October—1 ♀.

Agrees with de Meijere's description and figure in most respects but is rather larger (body and wing length 11 mm.).

NESOPEZA GRACILIS var. *major* n. n.

Differs from typical *N. gracilis* as follows:—Femora with the tips only very indistinctly darkened. No trace of a dark cloud over *Cu_{1a}*. Size larger; body and wing-length about 14 mm.

In the ♂ the cell *M₁* is very long, with an extremely short stalk. Hypopygium small; ninth tergite with a pair of blunt sub-lateral blackened processes, and a small sharp median black tooth. Outer claspers very small and thumb-like, pale in colour.

Mt. Murud, 5500-6300 feet, November—1 ♂, 1 ♀ in cop.

NESOPEZA COSTALIS var. *borneensis* sp. n.

Differs from typical *N. costalis* Brun. (from S. India) as follows:—*Proboscis* blackish. *Wings* without any trace of darkening over *Cu_{1a}* or at the tips of any of the veins on the posterior margin of the wing. Length of body 10 mm.; wing 9 mm.

Mt. Penrissen, 4500 feet—1 ♀.

Although much resembling *N. gracilis*, *N. costalis* is certainly quite distinct on account of the much shorter cell *M₁* and the absence of dark markings on the pleurae. It is possible that the Bornean form is really specifically distinct from the Indian.

DOLICHOPEZA PALLIDITHORAX de Meij.?

Mt. Penrissen, 3000 feet—1 ♂ (immature).

Alexander would place this and allied species in *Nesopeza*, on account of the rather long *Rs*, but it would seem to me better confine *Nesopeza* to the species with ornate wings.

DOLICHOPEZA CUNEATA sp. n. (Plate 9, fig. 21; Plate 10, fig. 42.)

Head ochreous, somewhat darker behind. Frontal tubercle scarcely indicated. Rostrum extremely short, with some dark hair but without nasus. Antennae brown, only the second segment ochreous; in the ♂ almost as long as the head and thorax together, in the ♀ a little shorter than the thorax. *Palpi* very long, ochreous, darkened in the middle and at the extreme tip. *Thorax* uniformly ochreous brown. *Abdomen* long and very slender, dark brown, with narrow greyish-ochreous rings beyond the middle of segment 2 and before the middle of each of segments 3-7. Hypopygium rather large, ochreous, black at the tip, structure as figured. Female cerci rather long, straight, bluntly rounded at the tip. *Legs* with the coxae ochreous, femora dark brown; tibiae brown, narrowly white at the base; tarsi mainly white, but the first segment on the front legs dark except at the base and tip, on the middle legs dark except at the tip, and on the hind legs with a broad dark ring in the middle. *Wings* remarkably narrow and cuneiform, pre-arcular portion rather elongate, axillary cell extremely narrow; colour uniformly greyish except for the dark brown stigma; venation as shown in the figure. Halteres black, very long and slender.

Length of body 10-12 mm.; wing 10.5-11.5 mm.

Mt. Penrissen, 2000 feet—6 ♂ (including type) 4 ♀.

"Dancing up and down between the buttresses of a jungle tree, 'swimming' continually with the legs while on the wing."

Mt. Poi, 200 feet—1 ♂, 1 ♀.

MITOPEZA MJÖBERGI sp. n. (Plate 9, fig. 20; Plate 10, fig. 43, 44.)

Head dark brown. Rostrum extremely short, barely one-sixth as long as the vertical diameter of the eyes. *Palpi* long, brownish. Antennae with the scape brown, flagellum black; in the ♀ shorter than the thorax, the first flagellar segment about four times, the second and following segments barely twice as long as broad; in the ♂ nearly twice as long as the head and thorax together, flagellum with rather long pubescence on the dorsal surface only, first segment very long, second about half as long, last few segments shorter. *Thorax* brown, unmarked. *Abdomen* dark brown, the segments paler basally. Ovipositor much as in *M. nitidirostris* Edw., but the spermathecal ducts not nearly so long. Hypopygium as figured. *Legs* dark brown. *Wings* brownish tinged, stigma dark

brown, with an indistinct pale area before and beyond it. Venation as figured. Halteres dark.

Length of body 6--7 mm.; wing 7.5--9 mm.

Mt. Penrissen, 3000 feet—1 ♂, 1 ♀.

Differs from the genotype in the open discal cell and shorter antennae.

PSELLIOPHORA STIGMATICA de Meij.

Mt. Penrissen, 2000 feet—1 ♀.

CTENACROSCELIS NOVAE-GUINEAE (de Meij.)?

Kalabit Country, Pah Trap—1 ♀.

CTENACROSCELIS PUNCTIPENNIS sp. n.

♂. *Head* dark brown, lighter behind at the sides, with a narrow ochreous margin to the eyes. *Antennae* 12-segmented, dark brown, second segment ochreous brown; flagellar segments almost cylindrical, each (except the last) a little shorter than the one preceding. *Palpi* dark brown. *Neck* dark brown, with two broad ochreous stripes above. *Thorax* dark brown above, the praescutal stripes somewhat darker than the ground-colour and with a slight greenish tinge. *Pleurae* largely ochreous-brown, the lower half of the pleurotergites conspicuously paler; a whitish stripe below the margin of the mesonotum from the spiracle to the wing base; below this stripe a large ill-defined dark brown patch. *Abdomen* rather dark brown; foveae of second segment large and conspicuous; hypopygium of normal structure, without definite hair tufts; hair on ninth tergite dark; claspers ochreous. *Legs* brownish ochreous; femora with a rather broad blackish pre-apical ring, which on the front legs is preceded by an indistinct ochreous ring. *Wings* rather dark brown, somewhat darker just before the arculus and on the stigma; small pale ochreous patches as follows: over the arculus, before and beyond the stigma, over the cord, just before the fork of *Cu*, below the tip of *An*, and before and behind the tip of *Ax*; also a short pale streak below *An* before the middle. Cell M_1 with short stalk; *m-cu* obliterated. Halteres brownish.

Length of body about 28 mm., wing 36 mm.

Mt. Murud? "November"—1 ♂.

TIPULA (*TIPULODINA*) *MAGNICORNIS* End.?

Mt. Dulit, 3000 feet—1 ♀.

TIPULA (TIPULODINA) CINCTIPES de Meij., var.

♂. *Head* dark brown above, pale ochreous above the insertion of the antennae, the dark colour continued forwards to a point almost to between the bases of the antennae. *Proboscis* short, light above, brownish at the sides. *Antennae* nearly half as long as the wing; scape pale ochreous, flagellum dark brown, bases of segments blackened; a small but distinct, thirteenth segment present. *Palpi* brownish ochreous. *Thorax* ochreous, more brownish dorsally, but without distinct stripes. A small dark dot below the prothoracic spiracle, another above the base of the mid coxae, and a dark streak at the base of the halteres. *Abdomen* brownish, with narrow ochreous bands, almost divided into pairs of spots, beyond the middle of the second and at the bases of the 3rd to 9th tergites. Ninth tergite with its posterior margin almost straight, with short black bristly hair which is aggregated into a pair of small admedian tufts. Upper clasper rather short and broad: lower clasper rather long and slender, tip pointed, blackened, and somewhat curved inwards: a strong, sharp black tooth projecting inwards a little beyond the middle. *Legs* with the coxae and trochanters pale ochreous, hind coxae with a brown patch behind. *Femora* brownish, blackened towards the tips, the front and middle pairs each with a narrow white subapical ring. *Tibiae* blackish, anterior pairs with a narrow subapical white ring, hind pair with narrow subbasal and broad subapical white rings. *Front and middle tarsi* black, becoming brownish towards the tips, hind tarsi with three broad white rings, occupying almost the outer half of the first segment, and the whole of the second and third segments, except for the bases and tips. *Wings* hyaline, stigma black, a small blackish cloud over $r-m$, and a dark brown patch at the tip of the wing, extending from before tip of R_3 to the tip of $R_4 +_5$, and including a whitish triangle in cell R_3 ; tips of M_1 , M_2 and Cu_2 very slightly clouded. *Venation* almost as in *T. magnicornis*, but cell M_1 narrower; cell Ax not very narrow. *Halteres* dark brown, knob lighter.

Length of body 15 mm.; wing 15 mm.; antennae 7 mm.

Mt. Dulit, 3000 feet, January—1 ♂.

Allied to *T. contigua* Brun. and *T. simillima* Brun., especially to the former, but quite distinct.

TIPULA (TIPULODINA) ALBIPRIVATA sp. n. (Plate 10, fig. 45.)

♂. Head blackish, ochreous above the antennae, with very slight frontal tubercle. Proboscis rather short, brownish, nasus distinct. Antennae longer than the head and thorax. scape orange, flagellum black, except the small thirteenth segment, which is dull ochreous. Palpi dark brown, terminal segment mostly ochreous. *Thorax* ochreous, darker dorsally, pronotum and a median line on the praescutum blackish. *Abdomen* ochreous, the tergites with black apical triangles, second tergite also blackish before the middle. Hypopygium as figured. *Legs* with the coxae and trochanters ochreous, femora brownish ochreous, with black tips, tibiae and tarsi black. *Wings* with nearly hyaline ground colour, stigma black; a broad but indistinct brownish shade across the middle of the basal cells; a rather large blackish cloud over $r-m$, another over the base of Cu_1 ; tip of wing broadly brownish, the colour reaching almost back to the stigma, but scarcely noticeable below R_{4+5} . *Rs* about as long as R_{2+3} and about twice R_2 ; R_{4+5} curved down and ending distinctly below the tip of the wing; cell Ax narrow, but not extremely so. Halteres black, tip of the knob pale.

Length of body 17 mm.; wing 18 mm.; antennae 7 mm.

Mt. Dulit, 3000 feet—1 ♂.

Although there are no white rings on the legs, the venation and general appearance suggest a relationship with the *Tipulodina* group.

TIPULA XANTHOMELAENA sp. n.

♀. *Head* ochreous, with a dark brown transverse band on the vertex connecting the eyes. Rostrum ochreous, shorter than the head, nasus long. Antennae scarcely as long as the thorax; scape brownish ochreous; flagellum black, base of first segment ochreous, verticils short, confined to the dorsal side of the segments. Palpi brownish ochreous, last segment lighter. *Thorax* ochreous, with a dark brown but not sharply defined median praescutal stripe, and pair of short, rather indistinct brownish lateral stripes. *Abdomen* rather bright yellow, tergites 2—8 each with a conspicuous black apical band which is slightly widened in the middle; sternites 2, 3 and 4 each with dark brown basal and apical bands, 5--7 all yellow. Ovipositor with the base ochreous, valves dark brown, moderately long and straight. *Legs* with the coxae and femora

ochreous, femora brownish ochreous, apical fourth blackened; tibiae and tarsi dark. *Wings* with a slight brownish tinge, stigma darker brown. *Rs* shorter than $R_2 +_3$ and not much longer than R_2 , which is angulate, *r* joining it at the angle. R_3 and $R_4 +_5$ straight, the latter ending just above Cu_1a not very oblique, in contact with the small discal cell for a short distance. Cell *Ax* rather narrow, of even width throughout. Halteres brownish.

Length of body 10--11 mm.; wing 10.5 mm.

Mt. Dulit, 3000 feet, January—1 ♀.

A small species of rather distinctive colouration, perhaps related to *T. robinsoni* Edw. (Sumatra).

TIPULA QUADRINOTATA Brun.

Mt. Murud, foot—1 ♀; head camp—1 ♀.

The following are probably either synonyms or varieties of this species:—*umbrinoides* Alex. (Java), *shirakii* Edw. (Formosa), *jacobsoni* Edw. (Sumatra), *pseudofulvipennis* de Meij. (Sumatra), *fumifascipennis* Brun. (India), and *fumicosta* Brun. (India).

TIPULA SULAICA Walk. (Plate 10, fig. 46.)

Kuching—1 ♂.

A rather distinct species on account of the structure of the antennal flagellum (see figure). Wing and hypopygium much as in *T. gedehicola* Alex. (Java), but costal cell almost clear (subcostal dark). The specimen agrees rather closely with Walker's type from Sula.

TIPULA WALKERI Brun. (FULVIPENNIS Walk.).

Mt. Poi, 5000 feet—1 ♂.

Superficially similar to the last, but antennae simple, flagellum bicolored, apical lobes of ninth tergite more sharply pointed and more spinulose, costal cell darker, axillary cell broader, with rather definite anal angle.

Explanation of Plate 9.

Wings of Bornean Nematocera, various magnifications.

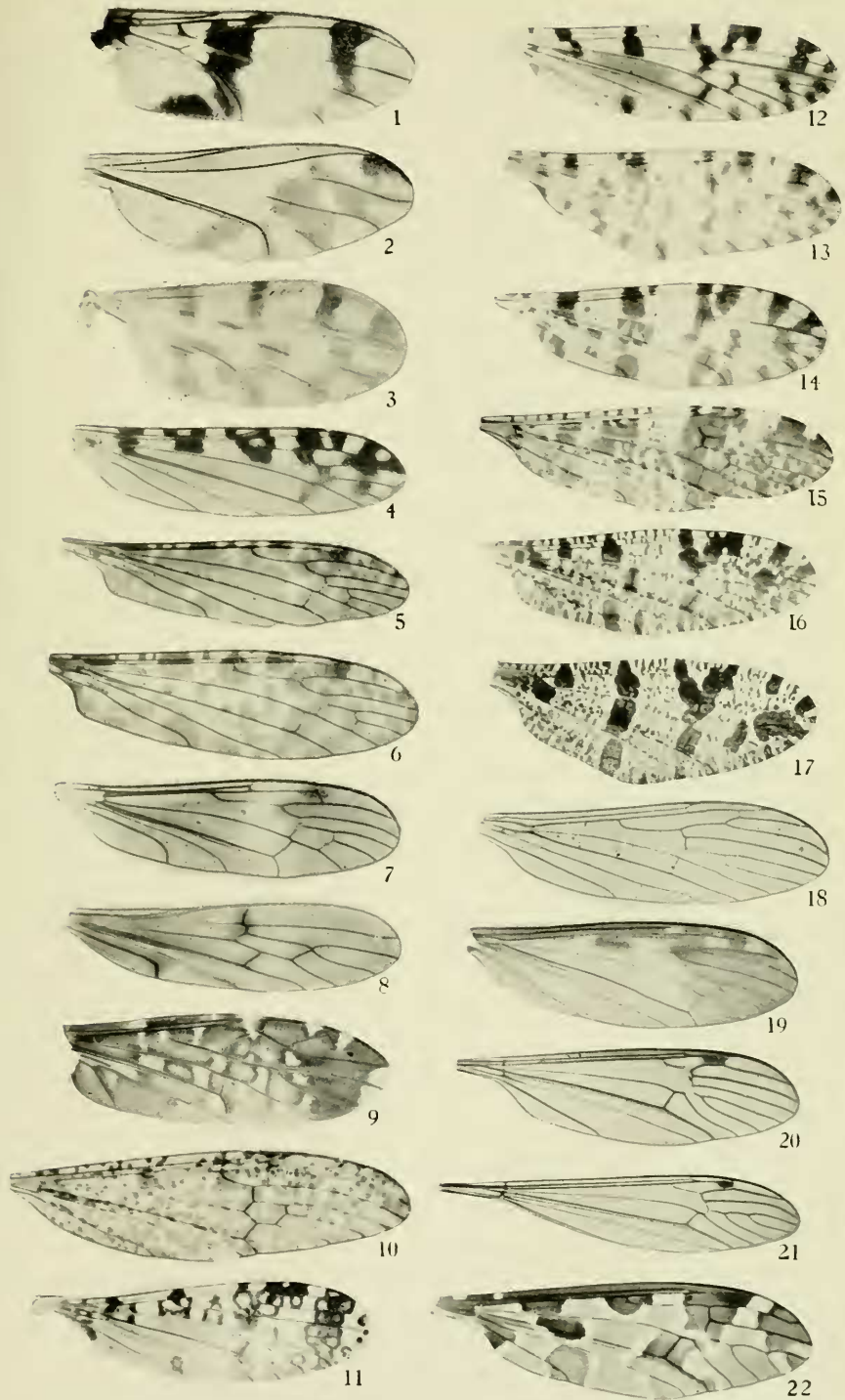
- Fig. 1. *Macrocera bifasciata* sp. n. ♂.
 ,, 2. *Lygistorrhina cincticornis* sp. n. ♂.
 ,, 3. *Culicoides gymnopterus* sp. n. ♀.
 ,, 4. *Rhipidia pictipennis* sp. n. ♂.
 ,, 5. ,, *griseipennis* sp. n. ♀.
 ,, 6. ,, *discreta* sp. n. ♀.

- Fig. 7. *Limnobia citrofocalis* sp. n. ♂.
 ,, 8. *Styringomyia transversa* sp. n. ♀.
 ,, 9. *Trentepohila venustipennis* sp. n. ♀.
 ,, 10. *Lecteria bipunctata* sp. n. ♂.
 ,, 11. *Limnophila* (*Dicranophragma*) *fenestrata* sp. n. ♀.
 ,, 12. ,, ,, *maculithorax* sp. n. ♀.
 ,, 13. ,, ,, *pallidithorax* sp. n. ♂.
 ,, 14. ,, (*Poecilostola*) *guttularis* sp. n. ♂.
 ,, 15. ,, ,, *murudensis* sp. n. ♂.
 ,, 16. ,, (*Ephelia*) *dulitensis* sp. n. ♀.
 ,, 17. ,, ,, *granulata* sp. n. ♂.
 ,, 18. ,, (*Troglophila*) *monticola* sp. n. ♂.
 ,, 19. *Eriocera murudensis* sp. n. ♂.
 ,, 20. *Mitopeza mjöbergi* sp. n. ♂.
 ,, 21. *Dolichopeza cuneata* sp. n. ♂.
 ,, 22. *Nesopeza perpulchra* sp. n. ♂.

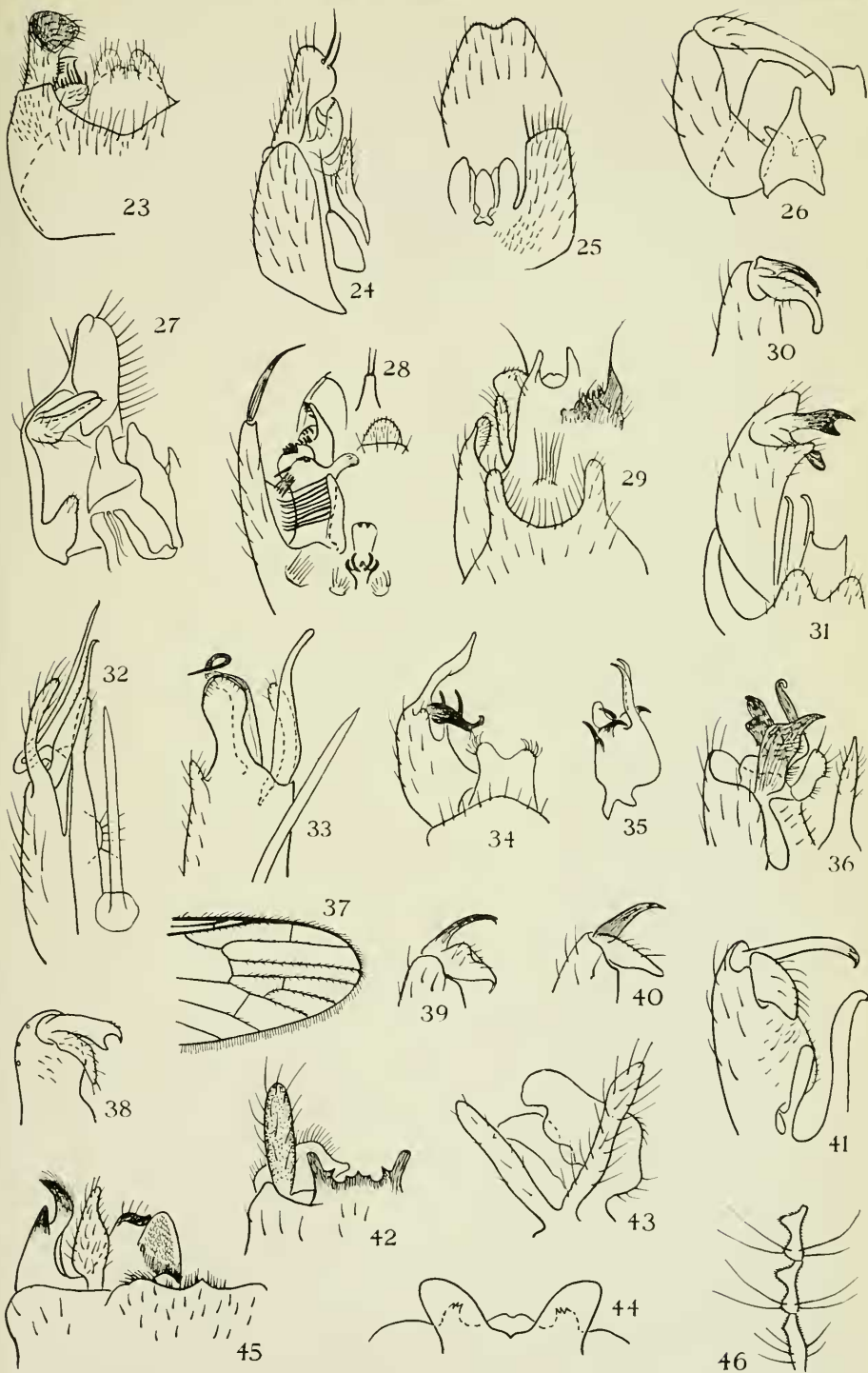
Explanation of Plate 10.

Details of male hypopygia, etc.

- Fig. 23. *Platyura penrissenensis* sp. n. ♂ hypopygium from beneath.
 ,, 24. *Eecheia pallidula* sp. n. ♂ hypopygium from above.
 ,, 25. *Eecheia pallidula* sp. n. ♂ hypopygium from below, also tip of eight sternite.
 ,, 26. *Culicoides gymnopterus* sp. n. ♂ hypopygium from beneath.
 ,, 27. *Limnobia microlabis* sp. n. ♂ hypopygium from beneath.
 ,, 28. *Styringomyia borneana* sp. n. ♂ hypopygium from beneath; tips of ninth tergite and sternite shown separately.
 ,, 29. *Styringomyia borneana* sp. n. tip of ♀ abdomen from beneath; anal cercus shown separately.
 ,, 30. *Helius fasciventris* sp. n. ♂ claspers.
 ,, 31. *Erioptera cacuminis* sp. n. ♂ hypopygium from above.
 ,, 32. *Molophilus albiceps* sp. n. ♂ hypopygium from beneath.
 ,, 33. *Molophilus murudanus* sp. n. ♂ hypopygium, half side view.
 ,, 34. *Gonomyia* (s. str.) *symmetrica* sp. n. ♂ hypopygium from above.
 ,, 35. *Gonomyia symmetrica aedoeagus*, half side view.
 ,, 36. *Gonomyia* (*Progonomyia*) *brunnescens* sp. n. ♂ hypopygium from above.
 ,, 37. *Rhabdomastix flavidula* sp. n. ♂ tip of wing.
 ,, 38. *Limnophila* (*Ephelia*) *granulata* sp. n. ♂ claspers.
 ,, 39. *Limnophila* (*Dicranophragma*) *pallidothorax* sp. n. ♂ claspers.
 ,, 40. *Limnophila* (*Poecilostola*) *guttularis* sp. n. ♂ claspers.
 ,, 41. *Limnophila* (*Poecilostola*) *murudensis* sp. n. ♂ hypopygium from above.
 ,, 42. *Dolichopeza cuneata* sp. n. ♂ hypopygium from above.
 ,, 43. *Mitopeza mjöbergi* sp. n. ♂ claspers from side.
 ,, 44. *Mitopeza mjöbergi* sp. n. ♂ ninth tergite.
 ,, 45. *Tipula albiprivata* sp. n. ♂ hypopygium from above.
 ,, 46. *Tipula sulaica* Walker, basal segments of antennal flagellum.



DIPTERA NEMATOCERA.



DIPTERA NEMATOCERA.